



Attorney Docket No. SYMXP011  
Client Docket No. 2003-051

APPLICATION FOR UNITED STATES PATENT

**SYSTEM FOR SYNTHESIS OF ELECTRODE ARRAY**

**By Inventors:**

Youqi Wang  
302 Atherton Ave.  
Atherton, CA 94027  
Citizen of United States

Martin Devenney  
1311 Bonita Avenue  
Mountain View, CA 94040  
Citizen of Ireland

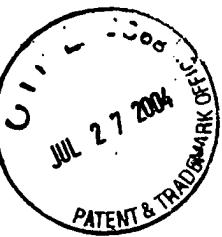
Ting He  
5794 Norm Street  
Dublin, Ohio 43016  
Citizen of Peoples Republic of China

**Assignees:** **Symyx Technologies, Inc.**  
3100 Central Expressway  
Santa Clara, California 95051

**Honda R&D Americas, Inc.**  
21001 State Route 739  
Raymond, Ohio 43067

**Entity:Large**

RITTER, LANG & KAPLAN LLP  
12930 Saratoga Ave., Suite D1  
Saratoga, CA 95070  
(408) 446-8690



## SYSTEM FOR SYNTHESIS OF ELECTRODE ARRAY

### FIELD OF THE INVENTION

The present invention relates generally to electrodes for use in electrochemical applications, and more specifically, detachable electrodes that can be prepared in an array format and detached from the array for use in an electrochemical screening system.

5

### BACKGROUND OF THE INVENTION

Electrochemical screening systems are used to study electrochemical reactions which typically involve the transfer of charge as a part of a chemical reaction. Typical electrochemical reactions in corrosion are metal dissolution and oxygen reduction. A rotating disk electrode (RDE) is one of a number of hydrodynamic voltammetric techniques that is widely used for the study of kinetic and mechanistic electrochemical processes at solid electrodes as well as for electroanalytical applications. RDEs and other types of working electrodes are used in a variety of electrochemical measurement applications, including, for example, battery characterization, measurements of electrocatalyst activity such as for example electrocatalysts for Proton Exchange Membrane Fuel Cells, corrosion studies and electroplating and electrocodeposition studies. The RDE technique is commonly used for the electroanalysis of trace metal components such as mercury and organic additives in plating baths. The RDE controls the transport regime of electroactive species toward the electrode. Rotating disk

10

15

20